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**REPORT OF THE
MEDICAL OFFICER
OF HEALTH**

FOR THE YEAR 1941.


L. A. M. JOHNSTON,
B.Sc., M.B., Ch.B., D.P.H.

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Mr. Chairman and Members,

I beg to submit herewith my First Annual Report on the Health and Sanitary Conditions of the District, being for the year 1941.

With this is incorporated the Report of the Senior Inspector who actually has been responsible for practically the whole section headed "Sanitary Circumstances of the Area."

It is greatly regretted that pressure of work, owing to War Conditions, etc., and the change in the general lay-out of the Report, has prevented the circulation of same earlier.

In view of the fact that certain statistics provided herein must not, according to Ministry of Health instructions, be made generally public in order to prevent figures being compiled for large areas by unauthorised persons for reasons of national security. It will therefore be greatly appreciated if these matters are treated as strictly confidential.

I gladly take the opportunity of thanking the Council and my Colleagues on the Staff for their kindness and willing co-operation at all times.

I am,

Mr. Chairman and Members,

Your obedient servant,

LILIAN A. M. JOHNSTON.

To the Chairman and Members
Hetton Urban District Council.

Public Health Officers of the Local Authority.

The members of the staff directly or indirectly concerned with Public Health are as follows:—

- (a) Medical Officer of Health and Medical Superintendent of the Fever Hospital and Conjoint Smallpox Hospital, with the degrees of B.Sc., M.B., Ch.B., and holding the Diploma in Public Health (also Medical Officer for Houghton-le-Spring Urban District and Isolation Hospitals).
- (b) Chief Sanitary Inspector holding the Certificate of the Royal Sanitary Institute and Sanitary Inspectors' Examination Board, the Certificate of the Royal Sanitary Institute for Inspector of Meat and Other Foods, and Certificate in Sanitary Science and Building Construction, and one assistant Sanitary Inspector also holding the Certificate of the Royal Sanitary Institute and the Sanitary Inspectors' Examination Board, and the Certificate of the Royal Sanitary Institute for Inspector of Meat and Other Foods.
- (c) One Surveyor holding the Certificate of the Royal Sanitary Institute, and assistant holding the Testamur of the Institute of Municipal and County Engineers, partly employed in sanitary work.
- (d) One Matron and one Nurse (both fully trained nurses) permanently employed at the Fever Hospital.

The Medical Officer of Health for the Urban District of Hetton is also the Medical Officer of Health for Houghton-le-Spring Urban District and acts as Medical Superintendent of that Council's Isolation Hospitals and of the Conjoint Smallpox Hospital.

Statistics and Social Conditions of the Area.

Area in acres—4527 acres.

Registrar General's estimate of resident population—mid 1941—18,190

Number of inhabited houses (end of 1941) according to Rate Books—5,258.

Rateable Value—£61,773.

Sum represented by a penny rate—£229/10/5.

Social Conditions and Chief Industries.

The chief industry in the district is coal mining. Unemployment formerly of considerable note in the area became very much less towards the end of the year as men and women became absorbed in war industries and enrolled on active service. The Registrar General's estimate of the general population for mid-year 1941 is 18,190, a reduction of 460 is apparently based on the assumption of approximately 550 persons having left the district for above occupations.

Vital Statistics.

Births and Birth Rate.

The nett number of live births (as corrected by the Registrar-General for outward and inward transfers) during 1941 was 319 as compared with 328 for 1940.

Sex and legitimacy classification are shown thus:

		Total	Male	Female	
Live Births	{ Legitimate	307	150	157	} Birth Rate per 1000 of the estimated population 17.53
	{ Illegitimate	12	7	5	

The Registrar-General states the Birth Rate per 1,000 population in England and Wales (live births) was 14.2 for 1941.

The following table shows (1) the total number of births (2) the number of males born (3) the number of females born (4) the birth rate per 1,000 population and (5) the total increase of pop-

ulation (i.e. the excess of births over deaths) for 1941 as compared with the years 1937—1940.

Year	Total births	Males	Females	Rate per 1,000	Total increase
1937	354	181	173	18.50	134
1938	393	200	193	20.10	161
1939	355	183	172	18.34	153
1940	328	160	160	17.53	98
1941	319	157	162	17.53	109

Still Births—During 1941 there were 17 still births in the district.

	Total	Male	Female	
Still Births	<div> <div>Legitimate</div> <div>Illegitimate ...</div> </div>	<div> <div>9</div> <div>0</div> </div>	<div> <div>4</div> <div>0</div> </div>	<div> <div>5 | giving a Rate of 27.95 per 1000</div> <div>0 | total (live and still births) births</div> </div>

There is a still birth rate per 1,000 population of 0.49 in the district as compared with 0.51 for England and Wales.

Deaths and Death Rate.

The Registrar-General reports that after correction for outward and inward transfers, 210 residents in the Hutton Urban District died, being 113 males and 97 females.

The death rate, therefore, corrected for outward and inward transfers and including deaths from all causes and at all ages was 11.55.

Locally compiled and correct figures are as follows:—

During 1941 there were 155 deaths registered as having occurred within the district, being 88 males and 74 females. Of these 4 males and 3 females did not normally reside in the area, therefore 84 males and 71 females having their permanent residence within the district died therein. 29 males and 26 females whose permanent residence was within the area died outside it. The total number of deaths therefore, corrected for outward and inward transfers, is 210, being 113 males and 97 females.

The death rate corrected for outward and inward transfers and including deaths from all causes and at all ages was 11.55 the population at mid-year 1941 being estimated to be 18,190. That for 1940 was 12.33.

Total Deaths under Five Years (corrected locally).

During 1941, 21 children died under the age of five years, Therefore 10 per cent of the total deaths was of deaths of children under 5 years of age.

Deaths in Institutions.

Of the 55 residents who died outside the district, 5 died in private houses. The remaining 50 died in Institutions, as follows :—

Sunderland Royal Infirmary	...	...	...	...	20
Durham County Mental Hospital, Sedgefield	...				1
Wolsingham Sanatorium	...	...	...	...	1
Sunderland Children's Hospital	...	...	...		3
Newcastle Royal Victoria Infirmary	...	...			1
Princess Mary Maternity Hospital, Newcastle	...				1
Relton House, Chester-le-Street	...	...	...		8
Ministry of Pensions Hospital	...	...	...		1
Hospital for Infectious Diseases, Sunderland	...				1
37, Crossgate, Durham	...	...	...	...	9
Oaklands, Bishop Auckland	...	...	...	...	1
Leeholme, Easington	...	...	...	...	3

1 resident in the district died in the Southern Isolation Hospital, therefore of the total 210 deaths of residents, 51 or 24.3 per cent occurred in institutions.

Deaths from Puerperal Causes. (Headings 29 and 30 of the Registrar-General's short list).

There was no deaths among women from puerperal sepsis but two from other puerperal causes, viz :

	Deaths	Rate per 1000 live births	Rate per 1000 total (live & still) births
No. 29—Puerperal Sepsis	—	...	...
No. 30—			
Other Puerperal Causes	2	6.21	6.04
	—	—	—
Total	2	6.21	6.04

The following Comparative Figures are available for England and Wales :—

Death Rate per 1000 total (live and still)		
births from Puerperal Sepsis ...	...	0.48
Death Rate per 1000 total (live and still)		
births from Other Puerperal Causes ...	...	1.75
		<hr/>
Total ...	...	2.23

Death Rate of Infants under One Year.

19 children died during 1941 before attaining the age of 1 year, being 7 legitimate males, 11 legitimate females and 1 illegitimate male.

During 1940, 23 children died during this age period, which figure included 2 illegitimate males.

The following table shows the death rate of infants under one year of age according to the total number of live births and legitimacy for the years 1937—1941 :—

		All Infants		Legitimate Infants		Illegitimate Infants
		per 1000 live births		per 1000 legitimate		per 1000 illegitimate
				live births		live births
1937	.....	65.0	.....	63.0	.....	111.0
1938	.....	83.9	.....	83.9	.....	—
1939	.....	36.3	.....	37.0	.....	—
1940	.....	80.9	.....	76.1	.....	250.0
1941	.....	59.00	.....	58.64	.....	83.33

It will be noted from Table II. that the largest number of infantile deaths occurred in Easington Lane Ward, for 9 died in Easington Lane, 7 in Hetton, 2 in Hetton Downs and 1 in Rainton and Moorsley.

For the purpose of these and following statistics the population of the various wards has been taken as follows :—

Easington Lane	5425
Hetton	4934
Hetton Downs	5711
Rainton and Moorsley	2120
	<hr/>
Total ...	18196

The ratio of infantile deaths per 1000 population is :—

Easington Lane	1.66
Hetton	1.42
Hetton Downs	0.35
Rainton and Moorsley	0.47

Of the 19 infants who died under one year of age, the cause of death was attributable to congenital malformation, prematurity and debility in 10 cases, giving a percentage of 52.6

The following table shows in detail the amount and causes of infantile deaths under one year of age during 1941, and also the number of deaths at the various ages, viz—5 under one week, 2 between 1 and 2 weeks, 1 between 2 and 3 weeks, 1 between 3 and 4 weeks, 1 between 1 and 3 months, 4 between 3 months and 6 months and 1 between 6 months and 9 months, a total of 19.

Since the total deaths from all causes and at all ages in the district was 210, 9.0 per cent. of the total deaths were of children under one year of age. Of these under one year of age 26.3 per cent were under one week and 47.4 per cent under four weeks of age.

Infant Mortality during the year ended 31st December, 1941.

Nett deaths from stated causes at various ages under 1 year of age.

Causes of Death			Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 4 Weeks	4 Weeks and under 3 Months	3 Months and under 6 Months	6 Months and under 9 Months	9 Months and under 12 Months	Total Deaths under 1 Year
All Causes	Certified ...	...	5	2	1	1	9	5	4	1	..	19
	Uncertified	...	...	...	...	...	...	...	...	...	...	...
{	Small-pox	...	...	...	...	..	...	...	...	..	...	...
	Chicken-pox	...	...	...	...	...	...	...	...	...	...	...
{	Measles	...	...	...	...	...	...	...	...	...	...	...
	Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...
{	Whooping-cough	...	...	...	...	...	...	...	...	...	...	...
	Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...
{	Erysipelas	...	...	...	...	...	...	...	...	...	...	...
	Tubercular Meningitis	...	...	...	...	...	...	...	...	...	...	...
{	Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...	...
	Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...
{	Meningitis (not Tuberculous)	...	...	...	...	...	...	...	..	...	..	...
	Convulsions	...	...	...	...	...	...	...	...	...	...	...
{	Laryngitis	...	...	...	...	...	...	...	...	...	...	...
	Bronchitis	...	...	1	...	...	1	...	2	1	..	4
{	Pneumonia (all forms)	...	...	...	...	...	...	...	1	...	...	1
	Diarrhoea	...	...	...	...	...	...	1	...	...	...	1
{	Enteritis	...	...	...	...	...	...	...	1	...	...	1
	Gastritis	...	...	...	...	...	...	...	...	...	...	...
{	Syphilis	...	...	...	...	...	...	...	...	...	...	...
	Rickets	...	...	...	...	...	...	...	...	...	...	...
{	Suffocation, overlying	...	...	...	...	...	...	...	...	...	...	...
	Injury at Birth...	...	...	...	...	...	...	...	...	...	...	...
{	Atelectasis	...	...	...	...	...	...	...	...	...	...	...
	Congenital Malformations	...	...	...	...	..	..	1	...	...	...	1
{	Premature Birth	...	2	...	...	1	3	...	...	...	...	3
	Atrophy, Debility and Marasmus	...	1	...	1	...	2	2	...	...	...	4
{	Influenza	...	...	...	...	...	...	...	...	...	...	...
	Other causes	...	2	1	...	...	3	1	...	...	..	4
			5	2	1	1	9	5	4	1	...	19

Nett Live Births—Legitimate.

Males. Females.

Illegitimate

Males. Females.

Corrected as per Registrar General ... } 150 157 7 5 = 319

Nett Deaths— 7 11 1 0 = 19
Local Corrected Figures.

During 1941 there were 193 deaths certified by registered medical practitioners (three of the deceased so certified having post mortems performed on them). 7 by the Coroner after inquest (without post mortem); and 10 were uncertified.

The ratio of deaths (at all ages and corrected) in the various wards is shown in the following two tables, the first showing the number of deaths which occurred in each ward (and in the district) during each of the four quarters, i.e. Seasonal incidence, and the second showing the age distribution of the deaths in the various wards.

Table I. Seasonal Incidence.

Ward	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Easington Lane	19	18	12	19	68
Hetton	24	13	17	20	74
Hetton Downs	19	14	10	9	52
Rainton and Moorsley	8	4	2	2	16
Totals	70	49	41	50	210

Table II. Age Incidence.

Ward.	Under 1 year.	1-2 years.	2-5 years.	5-15 years.	15-25 years.	25-45 years.	45-65 years.	65-75 years.	75 years & over.	Total.
Easington Lane	9	1	...	...	4	10	22	13	9	68
Hetton	7	...	...	3	3	6	18	20	17	74
Hetton Downs	2	...	1	2	1	3	19	15	9	52
Rainton and Moorsley	1	...	...	2	...	3	4	4	2	16
Total	19	1	1	7	8	20	63	52	37	210

During the year under consideration there were 5 deaths from the chief zymotic diseases, giving a death rate per 1000 population, from this cause of 0.27.

There were 2 deaths from 'infantile' diarrhoea (under 2 years of age).

In 1940 there were 2 deaths from the chief zymotic diseases, equivalent to a death rate of 0.11 per 1000 population.

Comparative Table :

No. of Deaths in Hetton Urban District
Population 18,190.

Death Rates in Hetton Urban District per 1000 population
as compared with those for
England and Wales.

He.—Hetton Urban Dist.
E-W—England and Wales

Year	All Causes	Typhoid and Paratyphoid Fevers	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Influenza	Diarrhœa under 2 years	All Causes		Typhoid & Paratyphoid Fevers		Smallpox		Measles		Scarlet Fever		Whooping Cough		Diphtheria		Influenza	
										He.	E-W	He.	E-W	He.	E-W	He.	E-W	He.	E-W	He.	E-W	He.	E-W	He.	E-W
1939	202	0	0	1	0	1	2	3	1	12.03	12.1	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.01	0.05	0.03	0.10	0.05	0.15	0.21
1940	230	0	0	0	0	0	1	0	0	14.05	14.3	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.05	0.06	0.00	0.32
1941	210	0	0	3	0	0	1	1	2	11.54	12.9	0.00	0.00	0.00	0.00	0.16	0.03	0.00	0.00	0.00	0.06	0.05	0.07	0.05	0.19

Causes of Death in Hetton Urban District during 1941.

Causes of Death.				Male		Female.
All Causes	....			113	....	97
1. Typhoid and paratyphoid fevers	....			0	....	0
2. Cerebro-spinal fever	....	....		1	....	0
3. Scarlet Fever	....	....	....	0	....	0
4. Whooping Cough	....	....	....	0	....	0
5. Diphtheria	....	....	....	1	....	0
6. Tuberculosis of respiratory system	....			5	....	2
7. Other forms of tuberculosis	....	....		0	....	0
8. Syphilitic Diseases	....	....	....	1	....	0
9. Influenza	....	....	....	1	....	0
10. Measles	....	....	....	1	....	2
11. Acute Polio-Myelitis and Polio-Encephalitis				0	...	0
12. Acute Infantile Encephalitis	...	...		1	...	0
13. Cancer of Buccal Cavity and Oesophagus (Male)					....
Uterus (Female)				0	....	2
14. Cancer of Stomach and Duodenum	....			5	...	3
15. Cancer of Breast	...	....	...	0	...	2
16. Cancer, all other sites	...	...		9	...	4
17. Diabetes....	....	....	....	1	....	3
18. Intra-cranial vascular lesions	....	....		13	....	13
19. Heart disease	....	....	....	20	....	23
20. Other diseases of Circulatory System	....			0	....	2
21. Bronchitis	....	....	....	7	....	11
22. Pneumonia	...	....	....	5	....	2
23. Other respiratory diseases	....	....		3	....	2
24. Ulcer of Stomach or Duodenum	....			3	....	0
25. Diarrhœa (under 2 years)	....	....		0	....	2
26. Appendicitis	....	....	....	1	....	1
27. Other digestive diseases	....	....		0	....	3
28. Nephritis	....	....	....	2	....	3
29. Puerperal and Post.Abortive Sepsis	...			0	....	0
30. Other material causes	....	....		0	....	2
31. Premature Birth	....	....	...	1	....	2
32. Congenital debility, malformations, etc.	....			9	....	2
33. Suicide	....	....	...	1	....	0
34. Road Traffic Accidents	....	...		1	....	0
35. Other violent causes	....	....		4	....	0
36. All other causes	...	....	....	17	....	11

The following table shows the Birth-rates, Death-rates, Analysis of Mortality, Maternal Death-rates, and Case-rates for certain Infectious Diseases for the year 1941, for England and Wales, 126 County Boroughs and Great Towns including London, 148 Smaller Towns. (Resident Population 25,000 to 50,000), compared with those for Hetton-le-Hole.

Birth-rates, Death-rates, Analysis of Mortality, Maternal Death-rates, and Case-rates for certain Infectious Diseases in the year 1941.

(England and Wales, London, 126 Great Towns and 148 Smaller Towns).

(Provisional Figures based on Weekly and Quarterly Returns).

	England and Wales.	126 County Boro's. and Great Towns including London.	148 Smaller Towns (Resident populations 25,000 to 50,000 at 1931 Census).	London Administra- tive County.	Hetton Urban District.
	Rates per 1,000 Population.				
BIRTHS—					
Live 	14.2	14.7	16.4	8.9	17.53
Still 	0.51	0.58	0.60	0.33	0.49
DEATHS—					
All Causes 	12.9	14.9	13.0	16.3	11.54
Typhoid and Paratyphoid fevers } ...	0.00	0.00	0.00	0.01	0.00
Smallpox 	—	—	—	—	—
Measles 	0.03	0.03	0.03	0.02	0.06
Scarlet Fever 	0.00	0.00	0.01	0.00	0.00
Whooping Cough 	0.06	0.07	0.06	0.04	0.00
Diphtheria 	0.07	0.08	0.06	0.03	0.05
Influenza 	0.19	0.17	0.20	0.15	0.05
NOTIFICATIONS—					
Measles 	10.33	8.27	10.47	4.77	33.92
Cerebo-Spinal Fever 	0.25	0.31	0.20	0.30	0.32
Whooping Cough 	4.39	4.37	4.50	3.50	7.04
Smallpox 	0.00	—	0.00	—	—
Scarlet fever 	1.47	1.49	1.51	1.01	1.26
Diphtheria 	1.25	1.53	1.19	0.93	0.88
Enteric fever 	0.12	0.14	0.12	0.09	0.16
Erysipelas 	0.30	0.36	0.27	0.50	0.77
Pneumonia 	1.25	1.53	1.04	1.07	3.19
	Rates per 1,000 Live Births.				
Deaths under 1 year of age 	59	71	56	68	85.6
Deaths from Diarrhoea and Enteritis under 2 years of age } ...	5.1	7.5	4.5	6.8	4.5
MATERNAL MORTALITY—					
Puerperal Sepsis 		}	Not available.		0.00
Others 					6.21
Total 					6.21
	Rates per 1,000 Total Births(i.e. Live & Still)				
MATERNAL MORTALITY—					
Puerperal Sepsis 	0.48	}	Not available.		
Others 	1.75				6.04
Total 	2.23				6.04
NOTIFICATIONS—					
Puerperal fever 	11.91	15.64	9.43	{ 2.29 19.33	13.0
Puerperal pyrexia 					

Causes of Death.

(a) Tuberculosis.

There were 7 deaths from pulmonary tuberculosis and none from non-pulmonary tuberculosis during 1941, being equivalent to a death rate, per 1000 population, of 0.38 from the pulmonary form.

Comparative Table :

Year	No. of Deaths from Pulmonary Tuberculosis	Death Rate per 1000 population from Pulmonary Tuberculosis England and Wales	Death Rate per 1000 population from Pulmonary Tuberculosis Hetton Urban District	No. of Deaths from Non Pulmonary Tuberculosis	Death Rate per 1000 population from Non Pulmonary Tuberculosis England and Wales	Death Rate per 1000 population from Non Pulmonary Tuberculosis Hetton Urban District
1937	13	.58	.66	3	.11	.15
1938	12	.53	.62	5	.16	.26
1939	11	Not available	.57	2	Not available	.14
1940	13	" "	.70	3	" "	.16
1941	7	" "	.38	0	" "	.00

(b) Heart Disease.

Heart disease was, as in former years, the chief cause of death throughout the area. 43 persons, being 20 males and 23 females, were certified to have died from heart disease. This is equivalent to 20.48 per cent. of the total deaths and to a mortality rate of 2.36 per 1000 population.

Comparative Table :

Year	Total Deaths All Causes	Deaths due to Heart Disease			Death Rate per 1000 population		Percentage Total Deaths due to Heart Disease
			M	F	All Causes	Heart Disease	
1937	220	46	27	19	11.5	2.34	20.91
1938	232	53	33	20	11.9	2.72	22.85
1939	202	42	24	18	10.5	2.18	20.79
1940	230	42	20	22	12.33	2.25	18.26
1941	210	43	20	23	11.55	2.31	20.48

Rheumatism is one of the most common causes of heart disease and has always been fairly prevalent throughout the district. The vital importance of this should always be borne in mind and most particularly the necessity of medical treatment for even slight rheumatism in the young.

Cancer.

25 deaths being 14 males and 11 females were due to cancer. This is equivalent to a mortality rate of 1.37 per 1000 population or 11.86 per cent of the total deaths.

The following table shows the number of deaths due to cancer in Hetton Urban District and the mortality rate from this disease in the years 1937—1941.

Year	Number of Deaths					Mortality Rate	
	Male		Female		Total	per 1000 pop	
1937	11	.....	15	.....	30	.....	1.52
1938	18	.....	17	.....	35	.....	1.80
1939	13	.....	16	.....	29	.....	1.50
1940	15	.....	17	.....	32	.....	1.71
1941	14	.....	11	.....	25	.....	1.37

Fear of operation and even a horror of diagnosis of cancer prevents a number of people from seeking medical advice early in the disease. Yet the efficacy of treatment, if given early, is steadily increasing. If all with any abnormality of health or unexplained swellings, particularly after the age of 45, would seek advice early many lives could be saved and much suffering avoided.

Treatment by radium is available at Sunderland Royal Infirmary whilst the large clinic for the North of England is at the Royal Victoria Infirmary, Newcastle.

Of the 25 deaths due to cancer 8 were due to cancer of the stomach, a site which is usually often attacked.

The following shows the sites of lesion, sex and age distribution of those who have died during 1941 from cancer as compiled from local returns.

Site.	Males—Ages.	Females—Ages.	Site	Males—Ages.	Females—Ages
Stomach...	71, 65, 65, 35, 51.	57, 62, 77.	Cervix ...		55
			Liver ...		45, 70.
Lung ...	21		Caecum...	73	46, 49.
Bladder...	47		Pancreas	65	75
Pelvis ...	55, 64		Rectum ...	77	
Breast ...		52	Brain ...	64, 47	
Uterus ...		64, 58	Larynx...		51, 71

General Provision of Health Services in the Area.

Public Health Officers of the Authority.

See commencement of Report.

Development or changes in the following Services.

Laboratory Facilities.

As before.

Ambulance Facilities.

As before.

There appears to be sufficient facilities for the transport of patients suffering from ordinary sickness or accident and infectious diseases. The Council's ambulance service is satisfactorily augmented by the ambulances which are provided by the Colliery Company.

Nursing in the Home.

Maternity nursing is now done almost entirely by midwives appointed by the County Council.

Sickness and Accidents. These cases may be attended by District Nurses. There are two branches of the Nursing Association operating viz. :

Easington Lane and Hetton-le-Hole. The subscription is extremely small, a penny per week. The County Council subscribe to all local branches annually, and anyone who is normally in receipt of Public Assistance may, in case of illness, have the services of a nurse on the recommendation of a doctor.

Infectious Diseases. These are usually nursed by parents or relatives or removed to the Council's Isolation Hospital. In very exceptional circumstances the Council could make available the provision of trained nurses for home nursing of infectious diseases.

Clinics and Treatment Centres.

There is no change in the services provided, all being maintained and administered by the County Council.

Hospitals — Public and Voluntary.

There is no change in the services provided.

Sanitary Circumstances of the Area.

Water Supply.

The major portion of the area is supplied by the Council's water undertaking, the supply being from limestone strata at a great depth below the surface and, therefore, from a very pure source. Certain outlying portions of the area, however, e.g., Moorsley and the Raintons are supplied from independent sources, Moorsley being supplied by the Colliery Company from water pumped to reservoirs in that area, and this water has from time to time been found to be below a reasonable standard of purity, but towards the end of the year under review some improvement was noted in the results of the bacteriological examinations. The Raintons are supplied direct by the Durham County Water Board and the supply is wholesome, but complaints are received from time to time of water shortage in the higher parts of that district. Bacteriological examinations of the three supplies have been made monthly throughout the year and it is satisfactory to note that, apart from the variations noted at Moorsley, it may be said that generally the results indicated that a reasonable supply of wholesome water was available throughout the district.

During the year the following work was carried out. A 4-inch branch supply was taken off the Durham County Water Board's main at Rainton Bridge for the purpose of an emergency supply, should the need arise; portions of mains were also repaired or reconstructed in various parts of the area.

Drainage and Sewerage.

The drains and sewers have been well maintained during the year, and the Glebe Sewage Works under the control of the Council continue to function satisfactorily.

Closet Accommodation.

Despite wartime conditions, the desire is still evident in the district to obtain conversions from ash-closets to water-closets, and during the year 7 further conversions were carried out, the majority of these being in the Hetton Downs Ward. Fourteen additional water-closets were also provided. The number of each type of convenience at the end of 1941 was as follows:—Water-closets, 3,993; ash-closets, 1,386; privy middens, 19.

Refuse Collection and Disposal.

This work is carried out under the supervision of the Health Department, six motors and 14 men being engaged, this staff being augmented by one hired cart which operates two days per week to deal with certain isolated premises which are difficult of access with motor vehicles. The bulk of the refuse is disposed of at four tips, which are controlled as far as the available supply of soil will allow.

During the year also much assistance was given to farmers by the depositing of ash upon land which was being reclaimed under the extended cultivation plan. Little trouble has been experienced during the year from tip fires, and, owing to the salvage of much waste material which previously was tipped, the tips are generally less offensive and much easier to keep tidy, and there is little trouble from infestation by rats. The number of premises scavenged is 5,258, and the approximate cost per house during the year under review was 15s. 8d.

Salvage of Waste Materials.

All forms of waste material which have any commercial value are salvaged, a separate collection being made from house to house. The response of the public to the scheme has been very good and their interest has been stimulated by the exhibition of lantern slides at local cinemas, house to house canvass by the Women's Voluntary organisations and the distribution of leaflets and a periodical exhibition. The salvage scheme has necessitated additional labour being engaged, four youths and one man being employed on the work. During the year approximately £571 was realised from the sale of waste material, and it is interesting to note that the total operation costs necessitated was £446, showing an approximate profit of £125. Particulars of weights of the main materials salvaged are as follows:—Paper, 88 tons 4 cwts.; bottles, 9 tons; scrap metal, 82 tons 8 cwts.; bones, 1 ton 5½ cwts.; rags, 4 tons 5 cwts. The total weight of all materials dealt with was 191 tons 8½ cwts.

Summary of work done in the Sanitary Inspector's Department during
the year 1941.

I. Public Health Acts.			Number of informal written Notices by Inspector.	Number of Formal Notices by order of Authority.	Number of Nuisances abated after Notice,
Dwelling-houses	}	Foul Conditions	23	...	23
and		Structural Defects	287	8	156
Schools		Overcrowding	...	...	...
Lodging-houses	...	...	...	...	...
Dairies and Milkshops	...	...	8	...	7
Cowsheds	...	...	4	...	3
Bakehouses	...	...	2	...	2
Slaughter-houses	...	...	...	...	...
Ashpits and Privies...	...	...	5	...	1
Deposits of Refuse and Manure	...	...	2	...	2
Waterclosets	...	...	46	3	34
Defective Yard Paving	...	...	4	2	...
House	}	Defective Traps	...	...	...
Drainage		No disconnection from sewers	...	...	...
		Other Faults	26	4	26
Water Supply	...	...	100	..	99
Smoke Nuisances	...	...	5	...	4
Other Nuisances	...	...	...	...	...
Defective Spouts	...	...	44	2	18
Provision of Dust Bins	...	...	89	...	89
Provision of Scullery Sinks	...	...	11	2	5
TOTALS			656	21	469

II.—Water, Food, and Drugs.	Number	Remarks.
Samples of Water taken for Analysis ... Samples of Water condemned as unfit for use Seizures of Unwholesome Food ... Convictions for exposing or selling Un- wholesome Food Samples of Food and Drugs taken for Analysis Samples found Adulterated	40 22 ...	For advisory purposes
III.—Precautions against Infectious Disease. Lots of Infectious Bedding stoved or destroyed Houses disinfected after Infectious Disease Schools disinfected after Infectious Disease Prosecutions for exposure of infected per- sons or things Convictions for exposure of infected persons or things	58 53	
IV.—General. Number of New Houses erected during year Number of such Houses occupied during year Ashpit-privies converted into Ash-closets ... Ash-pit privies converted into Water-closets Ash-closets converted into Water-closets ... Total number of Water-closets in District.. Total number of Ash-closets in District ... Total number of Ash-pit privies in District...	... ... ... 7 3993 1386 19	8 additional W.C. s 6 W.C.'s other premises

Housing.

Owing to the war no Council houses or houses built by private enterprise were completed during the year under review and some houses on the Peat Carr Estate were for the same reason left in an incomplete condition, and it has not been possible to obtain the necessary sanction to complete these. Many families are, therefore, still living under very bad housing conditions, in some cases in areas where clearance orders have been confirmed by the Minister for some years, and others in areas which were scheduled for clearance or compulsory purchase orders prior to the outbreak of war but in respect of which the orders were not confirmed. These houses were unfit for human habitation some years ago and are steadily deteriorating. The Health Department are constantly re-inspecting them and are in the majority of cases, obtaining repairs necessary to keep the houses reasonably weathertight, but the execution of repairs which would make the houses even reasonably fit for habitation is not an economic proposition, nor is it possible to carry out such works owing to war-time restrictions with regard to materials and labour.

Houses subject to orders become vacant from time to time, but demolition is not enforced, the majority of the owners, however, appreciate the impracticability of re-occupying the property and demolish for the sake of obtaining building materials. In this respect 27 houses were demolished during the year under review and the sites cleared.

Every effort is made to keep abreast with the overcrowding problem and this presents difficulties not present in peace-time, due to the continual movement of the population owing to calls to National Service, Evacuation, etc. No houses were built for the relief of overcrowding prior to the war and we thus have our pre-war problem accentuated owing to war conditions. The housing position at the end of the year was as shown below, namely:—

Number of families still occupying houses which were subject to orders made prior to the war	...	...	...	...	...	147
Number of families occupying houses which had been scheduled for clearance prior to the war but where formal action is incomplete	...	...	...	...	...	284
Number of families living under overcrowded conditions	...	...	...	...	...	77
Total number of families affected	...	...	...	...	...	508

During the year under review 8 cases of overcrowding recorded in the Register were abated.

Shops Acts.

The shops were regularly inspected, and throughout the district comply with the requirements of the Acts regarding sanitary accommodation and the necessary amenities for the comfort of shop assistants. The curtailment of hours by the blackout during the winter months and also the generally short supply of goods has resulted in much shorter opening hours being adopted by shopkeepers, to the benefit of the assistants, and no infringement of the closing hours requirements occurred during the year under review.

Tents, Vans, Sheds and Camping Sites.

There are no tents, vans and sheds occupied in the district and no sites used for camping. Certain halls have, from time to time, been used as billets, and arrangements were made for additional sanitary accommodation of a temporary nature to be supplied to these, and these conveniences were cleansed daily by the scavenging staff.

Swimming Baths and Pools.

There are no public or privately owned swimming baths in the district, but there is a swimming pool attached to the Boy's Club at Lyons Colliery, and this has proved a great attraction and has been at all times maintained in a satisfactory sanitary condition.

Schools.

The schools were periodically inspected and the sanitary condition throughout the area was found to be of a high standard. It was not necessary during the year to close any schools on account of infectious disease as cases were few in number and not confined to any part of the area and, therefore, entirely without evidence of mass infection.

Public Houses, Halls and Cinemas.

These premises were systematically inspected throughout the year and certificates issued as to their sanitary condition. Minor repairs were necessary in certain cases but, as prior to the war the whole of the premises of this nature throughout the district were systematically overhauled, and in quite a number of cases entirely re-built, no extensive repairs were necessary during the year under review, and a very high standard of sanitation is observed throughout the district.

Food Inspection.

Owing, as a result of war-time conditions, to the centralised slaughtering, no food animals are now slaughtered in the area, with the exception of occasional pigs which are killed by smallholders or farmers for their own consumption, and casualties. Despite this however, slaughter-house licences were renewed annually as in previous years as the need might arise, owing to enemy action, for them to be put into use at any time, and an endeavour has been made also to get the licenced slaughter-men in the district to take out their slaughtering licences. Many of them are still engaged in slaughtering at the central slaughter-house, and others who are now engaged in other work appreciate the benefit of continuing to be licenced slaughter-men. The number of slaughter-houses on the Register at the end of 1941 was 15, and the number of slaughter-men holding licences from the Council was 32.

Butchers' shops and slaughter-houses are, of course, still regularly inspected and are being maintained in good structural condition. Food shops generally are inspected regularly and as a result considerable quantities of tinned foods, bacon, butter and other perishable commodities were condemned as unfit for human consumption. Every effort is made to avoid condemning foodstuffs which can possibly be used, and in many cases where bacon, butter and the like were affected licences to sell ration free were issued in conjunction with the Food Office, in order that the commodity might be marketed before it became totally unfit.

The following animals were examined during 1941:—

1 heifer—casualty, 20 pigs—sound, 1 pig—casualty, sound. and the following foodstuffs were examined and condemned as being unfit for human consumption:—

18 lbs. cheese, $3\frac{1}{2}$ lbs. butter, 18 rabbits, 11 lbs 2ozs. cooked ham, $\frac{1}{4}$ lb. ham roll, $\frac{3}{4}$ lb. beef galantine, 24 lbs. bacon, 2 stones pork, 102 lbs. brawn, 84 lbs. boneless beef, 118 lbs. beef, 12—1 lb. jars jam, 15—2 lb. jars jam, 1—3 lb tin meat roll, 20—3 lb tins fish roll, 6—6 lb. tins chopped ham, 1— $14\frac{1}{2}$ oz. tin condensed milk, 79— $14\frac{1}{2}$ oz. tins evaporated milk.

Milk and Dairies.

The cowsheds and dairies were regularly inspected and samples were periodically taken from producers and dairymen and submitted

for bacteriological and chemical examination for the determination of the bacterial count, coliform content and percentages of fatty and non-fatty solid contents. An endeavour is made to take a complete batch of samples as closely as possible together, to ensure consistent weather conditions. The results were generally good, but where, in a few isolated cases, the results were sub-standard, the matter was taken up with the producer or dairyman, with a view to improving milking technique, and a further sample was taken to check the results. The standard of cleanliness observed is generally good, particularly having regard to war-time conditions and labour shortage. The number of producers on the register at the end of the year was 12 and the number of retailers was 18. In addition 6 distributor's supplementary licences under the Milk (Special Designations) Order were issued during 1941 to persons who were selling graded milks by retail in the district.

Bakehouses.

At the end of 1941 there were 6 retail bakehouses in the district. These were periodically inspected and a satisfactory standard of cleanliness was found to be maintained. In a few instances it was necessary to draw the attention of the proprietor to the requirements of the Factories and Workshops Acts with regard to the periodical cleansing of the premises and these intimations received prompt attention.

The Shops Acts.

The shops were regularly inspected with a view to obtaining compliance with the Shops Acts as regards closing hours, sanitary accommodation and the hours worked and amenities provided for assistants. A generally high standard is maintained in this respect throughout the district. The Health Department is also responsible for the decontamination of foodstuffs which may be affected by poison gas or other enemy action, and in the early part of 1941 courses of lectures were organised to which all persons employed in food shops throughout the district were invited. The attendance at these lectures were very satisfactory and it is interesting to note that, almost without exception, food shops throughout the area have some representative on their staff who is trained to deal with contaminated foodstuffs. A large number of volunteers were enrolled and it is to be regretted that, owing to call-up for National Service, many of those so trained have now left the area. At the

end of the year, however, the pool of trained volunteers available was still much in excess of the basic number allocated to the area for this purpose.

Factories and Workshops.

Factories and workshops were regularly inspected with a view to obtaining compliance with the requirements of the Act and the following table shows the amount of work carried out by the Department in this respect.

1—Inspections for purposes of provisions as to health.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS.

Premises (1)	Number of		
	Inspections (2)	Written Notices (3)	Occupiers prosecuted (4)
Factories with mechanical power ...	9	2	...
Factories without mechanical power...	28	7	...
†Other Premises under the Act (including works of building and engineering construction but not including out-workers' premises).	4	1	...
†Electrical Stations should be reckoned as factories. Total	41	10	...

2—Defects found.

Particulars (1)	Number of Defects			Number of defects in respect of which Prosecutions were instituted (5)
	Found (2)	Remedied (3)	Referred to H.M. Inspector (4)	
Want of cleanliness (S1) ...	3	3	...	...
Overcrowding (S2) ...	...	...	...	...
Unreasonable Temperature (S3) ...	2	2	...	...
Inadequate ventilation (S4) ...	1	1	...	...
Ineff'ctive drainage of floors (S6) ...	1	1	...	...
Sanitary conveniences (S7):—				
Insufficient ...	2	1	...	...
Unsuitable or defective ...	...	...	...	...
Not separate for sexes ...	1	1	...	...
Other offences ...	...	...	...	...
(Not including offences relating to Home Work or offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories & Workshops Transfer of Powers) Order 1921, and re-enacted in the Third Schedule to the Factories Act, 1937.)				
Total ...	10	9	...	...

Eradication of Bed-bugs and Vermin.

During the year under review action was taken for the eradication of bed-bugs and other vermin in the undermentioned premises:—

(a) Council Houses ...	25
(b) Private Dwellings ...	23

These houses, which, with a few exceptions, were not seriously infested, were successfully disinfested. Infested premises are treated by fumigation and thorough spraying with an approved insecticide. Experiments are continually in progress with a view to obtaining a completely satisfactory insecticide and the proprietary material at present in use is found to be eminently satisfactory. Treatment is generally carried out on three occasions, firstly, to eradicate existing vermin; secondly, to kill vermin which have subsequently incubated; and thirdly, to ensure positive eradication. Subsequent visits are made to ensure that re-infestation has not taken place and that the tenant is making an effort in this direction. The whole of the work is carried out by the Council's workmen, under the supervision of the Health Department, treatment in difficult cases being carried out personally by the Sanitary Inspectors.

Prevalence of, and Control over Infectious and other Diseases.

During the year 1941 some 907 cases of infectious diseases including all forms of Tuberculosis were notified as occurring in the district. This shows a large increase on the figure for 1940 which was 409, this is due to the large number of notifications of measles and whooping cough, which diseases became epidemic in the area during the year.

Scarlet Fever.

There were 25 cases of Scarlet Fever in the district compared with 22 in 1940.

Of these 21 were isolated in hospital. The district is not particularly suitable for home nursing of such infectious diseases for, although statistics do not show a large amount of overcrowding, yet the present standard for overcrowding demands a kitchen to be included as a living room and this means that in many cases which are not stated to be overcrowded, it is nevertheless completely impossible to give a sick person a bedroom to his or herself. For the same reason it has been found impracticable to shorten the duration of stay in hospital since the patient cannot be guaranteed a separate bed, etc., on discharge. Return cases are practically unknown when patients are isolated for six weeks, but more frequently occurred when the stay in hospital was shortened, or if the patient was released early when nursed at home.

Three cases of puerperal pyrexia were notified and there was no history of any relationship with scarlet fever, or sore throat without rash.

The case incidence for the district is 1.37 per 1000 population, that for England and Wales being 1.47.

The case incidence for the various wards is 1.80 Hetton, 1.40 Hetton Downs, 1.47 Easington Lane, and nil for Moorsley and Rainton, each per 1000 population.

Diphtheria.

There were 16 cases of diphtheria in the district during 1941, as compared with 27 cases in 1940. All these cases were isolated in the Rainton Bridge Isolation Hospital.

Although some of the cases were acutely ill on admission there was only one death. This was most probably due to the prompt use of antitoxin by practitioners outside. Antitoxin is supplied free and advantage is taken of this service, since it is frequently given in cases of doubt whilst waiting for the bacteriological report. It may be obtained at the Health Dept.

The County Council pay for the examination of swabs which are sent by medical practitioners to the Public Health Laboratory, Armstrong College, Newcastle-on-Tyne.

Of the 16 patients treated in the Rainton Bridge Hospital, one died.

The case incidence of diphtheria in the district was 0.88. as compared with 1.25 for England and Wales.

The case incidence in the wards is Hetton 1.01, Hetton Downs 0.35, Easington Lane 0.36 and Rainton and Moorsley 3.30 per 1000 population.

Diphtheria Immunisation.

This has been conducted by means of 'School Campaign' for several years—i.e., propaganda letters and consent forms have been circulated through the schools. The result has been that where there were no children of school age little contact has been made with the parents. There is no doubt that this explains the unfortunate position existing in this area, with few exceptions the bulk of this preventative treatment has been received by the 5-15 years of age group leaving the most vulnerable group (under 5 years) unprotected.

Between 1st January, 1940 and 15th December, 1940, 75 children under 5 years and 328 between 5 and 15 years were treated. At 31st December, 1940, approximately 9.17 per cent of children under 5 years and 39.9 per cent between 5 and 15 years of age had been treated.

In the year under consideration in this report (1941), 90 children under 5 years and 478 between 5 and 15 years were treated, the position at the 31st December, 1941, being that approximately 10.2 per cent of children under 5 years and 56.3 per cent of those between 5 and 15 years had received treatment.

During the year 13 cases of diphtheria were notified one of whom had been previously immunised. In this case the child had been treated six years previously.

It is now definitely recognised that immunity begins to wane through time and it is desirable that children who have been previously treated should have at least a single injection any time three years after the first treatment.

During the year under consideration in Scotland there was only one death from diphtheria out of 766,000 children who had been immunised, but there were 418 deaths out of 389,000 who had not received this treatment.

Influenza.

There was a fairly mild epidemic of Influenza at the commencement of the year and cases again began to be more numerous about December. 1 death occurred in which influenza was stated to be the primary cause of death, as against none in 1940, and there were 7 deaths from pneumonia (all forms) a certain number of which were secondary to influenza, an increase compared with 1940, when 5 died of pneumonia.

Measles, Whooping Cough, Pneumonia and Erysipelas.

The epidemic of measles which commenced at the beginning of 1940 continued during most of the first half of 1940. There were 3 deaths attributed to this cause.

No local action has been taken in the use of measles serum for prevention or attenuation of the disease.

There is no doubt that measles serum is of very great value for this purpose but unfortunately there is by no means a sufficient supply in the country to meet the demands for it. As it becomes more plentiful its use in the district must be seriously considered. It will be necessary probably to supply it free, at least in a considerable number of cases, like diphtheria anti-toxin.

Whooping-cough became mildly epidemic on a few occasions but was generally of a mild type. There were no deaths.

No case of measles or whooping cough was admitted to the isolation hospital as such. There is no doubt that hospital treatment in complicated cases of measles or whooping cough is of the greatest value. When accommodation is available in the Isolation Hospital these cases can be admitted.

The number of cases of pneumonia notified showed a definite decrease whilst erysipelas remained approximately the same, there being 58 cases of pneumonia and 14 cases of erysipelas notified during 1941, as against 68 and 13 respectively in 1940. The case rate for pneumonia and erysipelas and the distribution thereof is shown in the tables hereafter.

Notifiable Diseases during the Year 1941.

The incidence of infectious diseases, other than tuberculosis, as notified in the district during the period under consideration, the number of cases which received treatment in hospital and the number of deaths from such infectious diseases is shown in the following table.

Notifiable Diseases (other than Tuberculosis) during 1941

Disease				Total Cases Notified	Cases Admitted to Hospital	Total Deaths
Smallpox	..	..	..	—	—	—
Scarlet Fever	..	..	..	25	21	—
Diphtheria	..	..	..	16	16	1
Enteric Fever (includ. Paratyphoid)				—	—	—
Puerperal Fever..	..	..	..	—	—	—
Puerperal Pyrexia	..	..	..	3	—	—
Erysipelas	..	..	..	14	—	—
Pneumonia	..	..	..	58	—	7
Ophthalmia neonatorum..	..	..	..	4	—	—
TOTALS	..	..	..	120	37	8

The following table shows the following important facts, viz.:— the age incidence of the cases of each of the various diseases including all forms of tuberculosis, the sex and age incidence of cases of pulmonary and non-pulmonary tuberculosis, and the incidence of each disease in every Ward.

Cases of Infectious Diseases Notified during the 53 weeks ended 3rd January, 1942.

Notifiable Disease	Number of Cases Notified												Total No. of Cases Notified in Each Ward						Cases Removed to Hospital.	No. per 1000 Population
	At Ages—Years												Total	Hetton	Hetton Downs	Easington Lane	Moorsley & Rainton	Total		
	Under 1	1-2	2-3	3-4	4-5	5-10	10-15	15-20	20-35	35-45	45-65	65 and over								
Scarlet Fever	...	1	1	1	1	11	8	2	...	...	...	...	9	8	8	...	25	21	1.37
Diphtheria	1	2	...	6	4	1	2	...	...	...	5	2	2	7	16	16	0.88	
Puerperal Pyrexia	1	2	...	...	...	1	...	2	...	3	...	0.16	
Pneumonia	...	5	5	3	4	6	1	2	8	3	10	5	20	12	21	5	58	...	3.19	
Erysipelas	2	3	2	3	4	...	1	2	9	2	14	...	0.77	
Pulmonary } Male	2	...	3	2	3	1	...	4	2	4	1	11	...	0.60	
Tuberculosis } Female	2	1	...	5	...	...	2	2	5	2	1	10	...	0.55	
Non-Pulmonary } Male	5	1	...	2	...	...	...	3	3	...	2	8	...	0.44	
Tuberculosis } Female	2	1	...	...	1	...	...	1	3	...	...	4	...	0.22	
Ophthalmia Neonatorum	1	1	2	...	4	...	0.22	
Acute Encephalitis Lethargica	
Cerebro-Spinal Meningitis	...	1	...	...	1	2	1	1	...	...	...	...	1	3	2	...	6	6	0.33
Enteric Fever	1	...	...	...	...	2	...	...	...	1	...	2	...	3	3	0.16	
Small Pox	
Dysentery	
Measles	...	32	81	88	83	233	20	6	...	...	...	...	131	210	218	63	617	...	33.92
Whooping Cough	...	12	20	23	17	28	1	...	1	...	...	...	43	37	37	11	128	...	7.04
Para-Typhoid Fever	
Totals	54	108	107	118	106	297	40	19	26	10	15	7	223	288	304	92	907	46		

Prevention of Blindness.

Schemes for the above are entirely under the jurisdiction of the County Council.

Tuberculosis.

There has been no action taken during 1941 under the Public Health Act (Prevention of Tuberculosis) Regulations, 1925 (relating to persons suffering from pulmonary tuberculosis employed in the milk trade), or Section 172 of the Public Health Act, 1936 (relating to the compulsory removal to hospital of persons suffering from tuberculosis).

New Cases and Mortality during 1941.

21 cases of pulmonary tuberculosis, being 11 males and 10 females were notified or came to notice during the year, also 12 cases of non-pulmonary tuberculosis being 8 males and 4 females. In 1940 there were 14 cases of pulmonary tuberculosis being 7 males and 7 females, and 9 cases of non-pulmonary forms, being 3 males and 6 females, notified.

The following table shows the distribution of pulmonary and non-pulmonary cases of tuberculosis notified in 1941 according to sex and ward.

Ward	Pulmonary Tuberculosis		Non-Pulmonary Tuberculosis		Totals
	M.	F.	M.	F.	
Hetton ...	4	2	3	1	10
Hetton Downs	2	5	3	3	13
Eas. Lane ...	4	2	—	—	6
Moorsley & Rainton	1	1	2	—	4
Totals ...	11	10	8	4	33

The following table shows the various age-periods, for males and females, at which the new cases were notified and when death occurred.

Age Period		New Cases				Deaths			
		Respiratory		Non-Respiratory		Respiratory		Non-Respiratory	
		M	F	M	F	M	F	M	F
Under 1 year	..	—	—	—	—	—	—	—	—
1 year	..	—	—	—	—	—	—	—	—
5 years	..	2	3	6	3	—	—	—	—
15 years	..	4	1	1	—	—	—	—	—
25 years	..	1	4	1	—	2	2	—	—
35 years	..	3	—	—	1	1	—	—	—
45 years	..	1	—	—	—	2	—	—	—
55 years	..	—	—	—	—	—	—	—	—
65 and upwards	..	—	2	—	—	—	—	—	—
TOTALS	..	11	10	8	4	5	2	—	—

Occupation.

In the case of pulmonary tuberculosis :

6 were housewives, 9 were miners, 1 was dependant and 5 were at school.

In the case of non-pulmonary tuberculosis :

1 was a laundress, 9 were at school, 1 was a miner, and 1 was a discharged soldier.

Site of Lesions in Non-Pulmonary Cases.

3 cervical glands, 1 axilla, 5 abdomen, 1 peripheral gland, 1 skin and 1 meninges.

Social Conditions of Patients Suffering from Tuberculosis.

Nearly 60% of the patients suffering from tuberculosis share their rooms with one or more persons, the majority also sharing the bed. This is definitely undesirable in cases of pulmonary tuberculosis or where there are discharging wounds and this should always be borne in mind in allocating houses. Financially the family income is that of the average working man in the district, but in a long drawn out illness such as tuberculosis the extras necessary for the patient frequently negatives the ability to pay rent for a larger house.

This is probably one reason why names of families with a patient suffering from tuberculosis are rarely found on the application forms for council houses.

Notification of Tuberculosis.

This seems to have been greatly improved within the past few years. Practitioners realise it is a duty and the patient or friends have learnt that notification is actually to help them since the sooner the County authorities know, the sooner they can help in treatment.

Examination of Sputa.

Sputa specimens are examined in the Public Health Laboratory, Newcastle, the County Council paying the charge therefor.

